

SAKHAYEV, I.I. (Kazan')

Weak dimensionality of moduli, rings, and algebras. Projectivity of
planar moduli. Izv. vys. ucheb. zav.; mat. no.2:152-157 '65.
(MIRA 18:5)

SAKHAYEV, I.I.

Projectivity of finitely generated plane modules. Sib. mat. zhur. 6
no. 2:564-573 Nov-Dec '65. (MIRA 18:8)

SAKHAYEV, Sh.

First boundary value problem of electromagnetic oscillations.
Vest. AN Kazakh. SSR 21 no.1:63-68 Ja '65.

(MIRA 18:7)

L 26016-66 EWT(a)/EWT(1) IJP(c) GS

ACC NR: AT6013424

SOURCE CODE: UR/0000/65/000/000/0080/0086

AUTHOR: Sakhayev, Sh.

ORG: none

TITLE: Solution of the first ¹⁶ boundary value problem ²¹ of electrodynamics for a sphere by the perturbation method

SOURCE: AN KazSSR. Sektor matematiki i mekhaniki. Issledovaniya po differentsial'nym uravneniyam i ikh primeneniyu (Research on differential equations and their application). Alma-Ata, Izd-vo Nauka, 1965, 80-86

TOPIC TAGS: first; boundary value problem, Hilbert space, integral equation, approximate solution, electrodynamics, perturbation method

ABSTRACT: The first boundary problem of electrodynamics is solved for an equation of the form

$$\varphi = \lambda K(t)\varphi + f_i.$$

The first boundary value problem for a sphere

$$\left\{ \begin{array}{l} \xi = R \sin \theta \cos \psi, \eta = R \sin \theta \sin \psi, \zeta = R \cos \theta, \quad \left(\begin{array}{l} 0 < \theta < \pi \\ 0 < \psi < 2\pi \end{array} \right) \\ r(s_0, s) = \sqrt{2} R \sqrt{1 - \sin \theta_0 \sin \theta \cos (\psi_0 - \psi) - \cos \theta_0 \cos \theta}, \end{array} \right.$$

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$$\frac{\partial \varphi(s_0, s)}{\partial n(s_0)} = (\text{grad}_{s_0} \frac{e^{-kr}}{r}, \vec{n}(s_0)) = -\frac{1}{2R} \frac{e^{-kr}}{r} (1 + kr)$$

is considered, which is rewritten as

$$\begin{aligned} \omega(s_0) &= \omega_1(s_0) - \frac{1}{4\pi R} \int \frac{e^{-kr}}{r} (1 + kr) \omega(s) ds, \\ X(s_0) &= X_1(s_0) - \frac{1}{4\pi R} \int \frac{e^{-kr}}{r} (1 + kr) X(s) ds. \end{aligned}$$

The case when the fundamental solution of the Helmholtz operator has the form

$\varphi = \frac{\cos kr}{r}$ is also considered, for which the integral equations take the form

$$\begin{aligned} \gamma(s_0, s) &= -\frac{1}{2R} \frac{kr \sin kr + \cos kr}{r} = \\ &= -\frac{1}{2R} \left(\frac{1}{r} + \sum_{n=0}^{\infty} (-1)^{n+1} \left[\frac{1}{(2n+2)!} - \frac{1}{(2n+1)!} \right] (kr)^{2n+2} \right). \end{aligned}$$

The coefficients a_i and the approximate solution

$$\begin{aligned} \omega_0(\theta_0, \psi_0) &= \omega_1(\theta_0, \psi_0) - \lambda(a_0 + a_1 \cos \theta_0 + a_2 \sin \theta_0 \cos \psi_0 + \\ &+ a_3 \sin \theta_0 \sin \psi_0 + a_4 \cos 2\theta_0 + a_5 \sin 2\theta_0 \cos \psi_0 + a_6 \sin 2\theta_0 \sin \psi_0 + \\ &+ a_7 \sin 2\psi_0 + a_8 \cos 2\psi_0 + a_9 \cos 2\theta_0 \sin 2\psi_0 + a_{10} \cos 2\theta_0 \cos 2\psi_0) \end{aligned}$$

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ACC NR: AT6013424

are found by solving the system

$$a_l = A_l - \lambda \sum_{m=0}^{10} a_{lm} a_l, \quad (l = 0, 1, \dots, 10).$$

Orig. art. has: 16 formulas.

SUB CODE: 12/ SUBM DATE: 23Jun65/ ORIG REF: 005

Card 3/3

SAKHELASHVILI, N.A.

Certain erythropoietic modifications in scleroma. Vest. otorinolary. 13 no.1:45-49 Jan-Feb 51. (GLML 20:5)

1. Of the Department for Diseases of the Ear, Throat, and Nose (Head--Honored Worker in Science Bashkir ASSR Prof.S.V.Mikhaylovskiy), L'vov Medical Institute.

SAKHELASHVILI, N. A., Candidate Med Sci (diss) -@ "Material on the morphological-functional characteristics of hematopoiesis in scleroma". L'vov, 1959. 16 pp (L'vov State Med Inst), 200 copies (KL, No 24, 1959, 152)

SAKHELASHVILI, Z.V.

Fauna of oyster beds in Gori District. Trudy Geol. inst. AN
Gruz. SSR. Geol. ser. 14:129-174 '65.

(MIRA 18:7)

Doc Med Sci

SAKHIBOV, D. N.

Dissertation: "Experimental Heliotropic Toxic Hepatitis with Ascites and its Pathogenesis."

26/5/50

Acad Med Sci USSR

SO Vecheryaya Moskva
Sum 71

MOROZOV, K.P.; SHIKIN, S.S.; SAKHIBOV, Sh.D.

Using volt-ampere characteristics in measuring reactive power
consumed by the network. Izv.AN Uz.SSR. Ser.tekh.nauk no.4:16-23
'62. (MIRA 15:7)

1. Institut energetiki i avtomatiki AN UzSSR.
(Electric measurements)

SAKHIBZAKAYEV, K. S.

SAKHIBZAKAYEV, K. S. - "Horseflies of the Northern Caspian coastal region and measures of combatting them". Alma-Ata, 1955. Acad Sci Kazakh SSR, Inst of Zoology. (Dissertation for the Degree of Candidate of Biological Sciences).

SO: Knizhnaya Letopis' No. 46, 12 November 1955. Moscow

SAKHIBZADAYEV K. S.

USSR / Zooparasitology. Mites and Insects as Disease Vectors. G

Abs Jour : Ref Zhur - Biol., No 12, 1958, No 53037

Author : Sakhibzadayev, K. S.

Inst : Institute of Zoology, AS Kazakh SSR.

Title : Gadflies (Tabanidae) of Northern Transcaspia. Report No. 1.

Orig Pub : Tr. In-ta zool. AN KazSSR, 1957, 7, 95-120.

Abstract : This is an ecologic-faunal review of gadflies in western Kazakhstan and Guryev oblasts. The outlines on species (25) contain observations as to changes of local populations, information on geographic distribution and ecology. A zoogeographic analysis is given, as are the characteristics of faunal groupings.

Card 1/1

USSR / Zooparasitology. Mite and Insect Vectors of
Disease Agents. Insects.

G

Abs Jour : Ref Zhur - Biologiya, No 5, 1959, No. 19735

Author : Sakhbuzadayev, K. S.

Inst : Zoological Institute AS KazSSR

Title : Materials on the Biology of Horseflies in
the Northern Regions of the Caspian Sea

Orig Pub : Tr. In-ta zool. AN KazSSR, 1958, 8, 215-221

Abstract : Concerning the dynamics of the flight,
infestation and feeding biology of horseflies
inhabiting the water-meadow, lake and
desert-steppe biotopes in the lowland regions
of the Caspian Sea.

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SAKHIBZADAYEV, K.S.

Numbers and distribution of horseflies (Tabanidae) in biotopes
of the northern part of the Caspian Sea region. Trudy Inst. zool.
AN Kazakh. SSR 9:158-163 '58. (MIRA 11:7)
(Caspian Sea region--Horseflies)

SAKHIBZADAYEV, K. S.

"The Tabanidae of the Zailiyskiy Ala-Tau."

Tenth Conference on Parasitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

Institute of Zoology, Academy of Sciences, Kazakh SSR (Alma-Ata)

SAKHIN, G.

20051 SAKHIN, G. Sobetskii lesoboz KT-12. Rasskaz o Tom, kak kirovtsy sozdali trelevochnyy traktor Zvezda, 1949, No. 4, s. 114-20.

SO: LETOPIS ZHURNAL STATEY, Vol. 27, Moskva, 1949.

1ST AND 2ND CROERS		PROCESSES AND PROPERTIES INDEX	
SAKHIN S.I.		9	
Basic principles of alloying structural steels. S. I. Sakhin and V. Ya. Vetrov. <i>Stal</i> 6, 286-91(1966). - This investigation was concerned with methods for imparting to structural steel ductility and fibrous structure of break. These properties were induced by regulating the rate of cooling after hardening. For each kind of steel tested, at a given hardness-testing temp., shape, etc., there was a crit. rate of cooling below which brittleness appeared. The kind and quantity of alloying elements should be chosen so as to obtain as low a crit. rate of cooling as possible. M. Hosh			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION			
MATERIALS INDEX		PROCESS INDEX	
GROUP		GROUP	

SAKHIN, S. I.

B

2728 Role Played by Boron With Respect to Fibrous Fracture in Heat-Treatable Steel. S. I. Sakhin, N. N. Rodionov, N. G. Vergazov, and A. D. Gurasov. Henry Bratcher. Translation 2758, 12 pages. (From *Stal*, v. 6, nos. 11-12, 1946, p. 666-672.)

Presents results of an investigation of the role of boron in the austenite transformation during quenching; of the susceptibility of boron-treated steel to temper brittleness, and of the development of constructional, heat-treatable, substitute steels. Micrographs.

Evaluation B-59660

SAKHIN, S. I.

18(7)

PHASE I BOOK EXPLOITATION

SOV/1838

Metallovedeniye; sbornik statey, [vyp.] 2 (Study of Metals; Collection of Articles, [Nr] 2) [Leningrad] Sudpromgiz, 1958. 265 p. 4,000 copies printed.

Resp. Ed.: G.I. Kapyrin, Candidate of Technical Sciences; Ed.: Ye. A. Krugova;
Tech. Ed.: K.M. Volchok.

PURPOSE: This book is intended for metallurgists and metallurgical engineers.

COVERAGE: This is the second volume of collected scientific papers dealing with various problems in physical metallurgy, particularly in mechanical metallurgy and metallography. Topics covered include hydrogen embrittlement, intragranular distribution of elements in alloys, effect of tempering on carbon redistribution, use of tritium to investigate certain phenomena in metals, effect of certain alloying elements on temper brittleness and hardenability of steel, strength of notched specimens of brittle steel, effect of strain hardening on the properties of an aluminum alloy, etc. The articles are concerned mainly with various types of steel, though some deal with nonferrous alloys.

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Study of Metals (Cont.)

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Sakhin, S.I., Candidate of Technical Sciences; A.M. Shchegoleva, Engineer;
A.D. Gusarov; and Ye. M. Dubina. Separate and Joint Effect of
Molybdenum and Tungsten on Temper Brittleness and Hardenability of
Steel

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Authors' conclusions: (1) Molybdenum and tungsten produce their most desirable effect when present in amounts which vary between very narrow limits. Under the test conditions these limits were 0.3-0.65% for Mo and 0.7-1.1% for W in specimens of a given hardness. When these elements are present in amounts above and below these limits, there is a tendency for the steel to develop temper brittleness and lose toughness when the rate of cooling from the quenching temperature is slowed down. The presence of harmful impurities in the steel, as well as testing under more rigid conditions, renders the limits still narrower. (2) Addition of molybdenum in amounts exceeding the optimum for tungsten (in this case above 0.25%), and, conversely, of tungsten in amounts exceeding the optimum for molybdenum (in this case above 0.40%) heightens the tendency of the steel towards temper brittleness, depending on the conditions of its cooling after tempering and after its austempering. (3) The joint

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Study of Metals (Cont.)

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addition of molybdenum and tungsten in a definite ratio in amounts not exceeding the optimum for each of these elements has beneficial results.

Sakhin, S.I., Candidate of Technical Sciences. Technological Methods of Determining the Hardenability of Structural Steel and Its Tendency to Temper Brittleness

123

Authors' conclusion. (1) An investigation was made of three methods of determining the hardenability of structural steel under treatment for improvement as well as its sensitivity to temper brittleness when in the form of heavy sections. In addition to the usual method of evaluating hardenability on the basis of hardness in the quenched conditions, the new methods make it possible to make a quantitative determination of hardenability and temper brittleness according to the type of fracture and the mechanical properties of specimens which have undergone final heat treatment. (2) All three methods are based on reproduction of the conditions of cooling of actual manufactured articles during their heat treatment. The first method (model testing in packs) permits the approximate reproduction of

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SAKHIN, S.I., kand.tekhn.nauk

Role of transition structures in the heat treatment of medium
alloys structural steel. Metallovedenie 3:88-105 '59.
(MIRA 14:3)

(Steel, Structural--Metallography)
(Phase rule and equilibrium)

S/129/62/000/001/003/011
E193/E383

AUTHORS: Sakhin, S.I., Candidate of Technical Sciences and
Sokolov, O.G., Engineer

TITLE: Increasing the strength of steels 30XHMA (30KhNMA)
and 30XГCНA (30KhGSNA)

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov,
no. 1, 1962, 14 - 19 + 1 plate

TEXT: The object of the present investigation was to study
the effect of the variation of several factors on the changes
brought about by TMO (plastic deformation of supercooled austenite,
followed by conventional hardening and tempering treatment -
abbreviation of the Soviet "termomekhanicheskaya obrabotka") in
steels 30KhNMA and 30KhGSNA with increased carbon and molybdenum
contents (0.41-0.45 and 0.45%, respectively). In contrast to
various investigations in which the properties of steel subjected
to TMO were measured on thin (3-6 mm thick) specimens, test pieces,
20 mm thick after TMO, were used by the present authors. In the
first series of experiments, specimens of steel 30KhNMA were
heated to 1 150 °C, cooled to various temperatures
and after holding at a given temperature for 20 minutes,
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Increasing the strength of

rolled at this temperature to 50% reduction, oil-quenched and, finally, tempered for 4 hours at 200 °C. The results of mechanical tests carried out on specimens treated in this manner are reproduced in Fig. 1, where the hardness (HB), yield point (σ_s , kg/mm²), UTS (σ_b , kg/mm²), impact strength (a_k , kgm/cm²), elongation (δ , %) and reduction in area (ψ , %) are plotted against the deformation temperature (°C). It will be seen that maximum strength and hardness, combined with minimum plasticity, were obtained after TMO, during which the austenite was deformed at 500 °C. The decrease in strength and increase in plasticity in specimens deformed at 400 °C were attributed to bainitic transformation, this conclusion having been confirmed by metallographic examination. In a similar series of experiments, the effect of varying the degree of deformation of the austenite at 500 °C on the properties of steel subjected to TMO was studied. The hardness and strength of the steel increased with the degree of deformation increasing from 0 - 30%, then remained almost constant and increased again when the degree of deformation

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E193/E383

Increasing the strength of

was increased from 40 - 60%. The proportion of the residual austenite after complete heat-treatment also increased with increasing degree of deformation, reached a maximum at 40% and then decreased again. Subjecting the specimens, before tempering, to sub-zero treatment at -80°C brought about an increase in strength and hardness and a considerable decrease in the proportion of residual austenite. Since heavy reductions entailed in TMO are difficult to attain in one operation, the effect of intermediate heating was studied in the next series of experiments. To this end, specimens of steel 30KhGSNA (with 0.43% C) were subjected to the following treatment: heating to 900°C - cooling to 550°C - first rolling pass to 25% reduction, followed by one-hour annealing at 550°C - second rolling pass to 25% reduction, followed by one-hour annealing at 550°C - third rolling pass to 13% reduction, followed by oil-quenching and tempering at 275°C . No difference was found between the properties of specimens treated by this and the standard TMO method, except that in the former case slightly higher values of impact strength were obtained

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Increasing the strength of

(2.2 against 2.0 kgm/cm²). The effect of the following treatment on the properties of steel 30KhGSNA (0.42% C) was studied in order to check the part played in TMO by grain-refinement. Heating to 900 °C - cooling to 550 °C and 25% deformation - reheating to 900 °C, holding at that temperature for 30 min, cooling to 550 °C and 25% deformation - reheating to 900 °C, holding for 30 min, cooling to 500 °C and 13% deformation - oil-quenching and 6-hour tempering at 275 °C. Also, properties similar to those produced by the standard TMO treatment were obtained in this case. In the last stage of the investigation, the part played in TMO by the products of pearlite/troostite transformation was studied. To this end, steel 30KhNMA, heated to 1 150 °C and cooled to 650 °C, was held at this temperature for 20 min or two hours, then given 50% reduction, oil-quenched and finally tempered for 4 hours at 200 °C. The properties of specimens treated in this manner were compared with those of steel subjected to identical treatment but without plastic deformation at 650 °C. The results are reproduced in Fig. 5,

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Increasing the strength of

showing the UTS (σ_b , kg/mm²), yield strength (σ_s , kg/mm²) and impact strength (a_k , kgm/cm²) of specimens held at 650 °C for 2 hours without plastic deformation (blocks 1), held at 650 °C for 2 hours and given 50% reduction (blocks 2) and held at 650 °C for 20 min and given 50% reduction (blocks 3). It will be seen that although the properties of steel subjected to TMO were adversely affected by the formation of pearlite and troostite, this effect was slight in comparison with that observed in steel which had not been deformed plastically at 650 °C. The properties of steel subjected to TMO are affected even more by isothermal treatment of super-cooled austenite in the Ar' region, carried out after the plastic deformation. This was revealed by tests, the results of which are reproduced in Fig. 6, where σ_b , σ_s and a_k of steel 30KhNMA are shown for specimens subjected to the following treatments: 1) oil-quenching from 1 150 °C; 2) heating to 1 150 °C, cooling to 650 °C, holding at this temperature for 2 hours and oil-quenching;

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Increasing the strength of

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3) heating to 1 150 °C, cooling to 650 °C, 20% plastic deformation, 2 hours at 650 °C, oil-quenching (in each case the steel was finally tempered for 4 hours at 200 °C). There are 6 figures, 2 tables and 19 references: 11 Soviet-bloc and 8 non-Soviet-bloc. The four latest English-language references mentioned are: Ref. 9: Metal Treatment and Drop Forging, v.27, no. 180, 1960; Ref. 14: D.I. Schmatz, V.F. Lackay, I.C. Schyne, Metal Progress, v.76, no. 3, 1960; Ref. 15: Steel, v. 145, no. 12, 1959; Ref. 16: Iron and Coal Trades Rev., v.180, no. 1775, 1960. ✓

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L 11092-63 EWP(q)/EWT(m)/BDS—AFFTC/ASD—JD
 8/0129/63/000/005/0045/0048
 ACCESSION NR: AP3000489

AUTHOR: Sakhin, S. I.; Sokolov, O. G.

TITLE: Strengthening austenitic steels 19

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 5, 1963, 45-48

TOPIC TAGS: thermomechanical treatment, high-temperature thermomechanical treatment, low-temperature thermomechanical treatment, mechanical properties, manganese austenitic steel, strengthening

ABSTRACT: The effect of thermomechanical treatment on the mechanical properties of high-Mn austenitic steels 50G20 and 50G20F [unidentified; according to designation the former contains 0.50% C and 20% Mn; the latter, 0.50% C, 20% Mn, and < 1% V] was investigated. The steels were melted in a high-frequency induction furnace, cast into 16-kg ingots, rolled, and then subjected to thermomechanical treatment (TMT). Two variants of TMT were used. In both variants specimens were annealed at 1000C (for 50G20) or 1175C (for 50G20F), cooled to 900C (high-temperature TMT) or 500C (low-temperature TMT), rolled or upset with various reductions, and immediately water-quenched. The best combination of mechanical properties was produced by the low-temperature TMT. The 50G20 steel rolled

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at 500C with 70% reduction had a tensile strength σ_b of 113.5 kg/mm², yield strength σ_s of 107.9 kg/mm², elongation δ of 18.5%, reduction of area ψ of 45.5%, and notch toughness a_k of 8.0 kg-m/cm². Corresponding figures for 50G20 water-quenched from 1000C are 75.5 kg/mm², 37.9 kg/mm², 67%, 70.5%, and 30 kg-m/cm². The 50G20F steel upset at 500C with a reduction of 40% had σ_b of 139.5 kg/mm², σ_s of 126.8 kg/mm², δ of 6%, and ψ of 9%. Aging at 600C for 10 hr brought about an additional improvement and increased σ_b to 148.0 kg/mm², σ_s to 138.0 kg/mm², δ to 7.0%, ψ to 22%, a_k to 4.8 kg-m/cm². Still higher strength, though with lower ductility, can be achieved by approaching the temperature of plastic deformation from below. The 50G20F quenched from 1175C, reheated to 600C, upset with 40% reduction, and water-quenched had σ_b of 162.8 kg/mm², σ_s of 148.0 kg/mm², δ of 2%, and ψ of 5.7%. Plastic deformation in low-temperature TMT can be done in several steps with relaxation periods or even with reheating to a temperature somewhat above that of the beginning of recrystallization. The 50G20 rolled at 500C in three passes with a reduction of 20% per pass and a 1-hr relaxation after each pass had σ_b of 125 kg/mm², σ_s of 115 kg/mm², δ of 18%, ψ of 47%, and a_k of 6.8 kg-m/cm². Orig. art. has: 3 figures and 3 tables.

ASSOCIATION: none

Card 2/2

ANTONOVA, I. T. ~~and~~ ~~SAVYUKA~~ Yu. A., kand. tekhn. nauk; L'YRIKH, V. E.
kand. tekhn. nauk.

Polymer-cement concrete with additives of fufuryl alcohol and
aniline hydrochloride. Stroi. mat. 10 no. 7:5-6 JI '64
(MIRA 18:1)

SAKHINCHIK, V. P.

"Experiments on the Irrigation of Spring Wheat in the Omsk Region." Cand Tech Sci, Omsk Agricultural Inst, Omsk, 1953. (RZhBiol, No 3, Oct 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (10)

So: Sum. No. 481, 5 May 55

SAKHIROV, N. I.

PHASE I BOOK EXPLOITATION

SOV/5690

23

Akademiya nauk Kazakhskoy SSR. Institut yadernoy fiziki.

Metallovedeniye i obrabotka metallov dayleniyem (Physical Metallurgy and Pressworking of Metals) Alma-Ata, 1961. 183 p. (Series: Trudy Instituta yadernoy fiziki, t. 4) 2,450 copies printed.

Resp. Eds.: I. G. Grinman and A. A. Prasnyakov; Resp. Secretary: V. V. Chervyakova;
Eds.: M. Ya. Brailovskaya and T. I. Shvachuk; Tech. Ed.: Z. P. Rorokina.

PURPOSE: This book is intended for scientific research workers, technical personnel in industry, and students and aspirants interested in problems of physical metallurgy and the pressworking of metals.

COVERAGE: The book, Volume IV of the Transactions of the Institute of Nuclear Physics, Academy of Sciences Kazakh SSR, contains papers reviewing problems of physical metallurgy. Attention is given to a consideration of metal ductility, strength, phase transformation, and the ordering of various alloys, and to a discussion of the diffusion mechanism of the plasticity. Experimental findings concerning strength, deformation, and external friction in the working of non-ferrous metals and alloys are included in papers dealing with metal rolling.

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507/5690

Physical Metallurgy and Processing of Metals

Problems of automatic inspection and control of multiaxial wire-drawing frames are also considered. Most of the papers are accompanied by references, the majority of which are Soviet.

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Physical Metallurgy and Pressworking of Metals

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Physical Metallurgy and Pressworking of Metals

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- Grinman, I. G., and L. P. Pushkarov. On the Frequency Method of Measuring the Backpull of a Wire During Drawing 132
- Grinman, I. G., Yu. V. Ovsor, V. S. Mishchenko, and Sh. Zakhtayev. Electroelectronic Micrometer for Gaging the Diameter of Moving Wires or Threads 138
- Grinman, I. G., and L. S. Mikhaylova. On the Automatic Measuring of the Wire Velocity and Footage During Drawing 147
- Yegay, A. G. Reactor Starting [and Acceleration] of the Wound-Rotor Electric Motor With Up to 100 kw Capacity by Using Electromagnets of the MD 300B PV 40/220v Type 151
- Malakhov, Yu. I., Study of the Automatic Electronic Drive of a Wire-Drawing Frame 158
- Grinman, I. G., and N. I. Sakhipov. On the Automatic Electric-Simulator Control of Wire-Drawing Frames 172

AVAILABLE: Library of Congress

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VK/wrc/mas
11-22-61

GRINMAN, I.G.; SAKHIPOV, N.I.

Automatic control of machines for repeated drawing with the help
of electric models. Trudy Inst.iad.fiz.AN Kazakh.SSR 4:172-183
'61. (MIRA 14:8)

(Wire drawing) (Automatic control)

GRINMAN, I.G. (Alma-Ata); SAKHIPOV, N.I. (Alma-Ata)

Problem of multiloop control of multiple ~~wire~~-drawing ~~mills~~ using
multiterminal networks. Avtom. i telem. 24 no.4:548-557 Ap '63.
(MIRA 16:4)

(Wire drawing) (Automatic control)

SAXHIULINA, G.T.

Electroencephalographic expression of tonic forms of activity of
the cerebral cortex during conditioned reflex activity. Zhur.vys.
nerv.deiat. 11 no.3:450-462 My-Je '61. (MIRA 14:7)

1. Physiology Laboratory, U.S.S.R. Academy of Sciences, Moscow.
(CONDITIONED RESPONSE) (ELECTROENCEPHALOGRAPHY)

HUNGARY

CRASTYAN, Endre, SAKHULIYA, G.T., and ANGYAN, Lajos, of the Institute for Biology at the Medical University (Orvostudományi Egyetem Elettani Intézete) in Pecs.

"Functional Significance of the Recruiting Potential Mechanism When Used as Conditional Stimulus for the Elaboration of the Avoidance Reflex"

Budapest, Acta Physiologica Academiae Scientiarum Hungaricae, Vol 23, No 2, 1963, pp. 155-167.

Abstract: [English article; authors' English summary, abbreviated] A stimulation eliciting recruiting potentials can be used successfully for conditioning. The essential factor was apparently the aftereffect of the stimulation rather than the stimulation itself. There was an inverse relation between the prominence of the recruiting response and its capacity to become a conditional signal. Stimulation itself had a direct inhibitory effect on the conditional reflex. A dominantly inhibitory mechanism is represented by the recruiting potential. Fourteen references, including 2 Hungarian and 12 Western.

1/1

GRASTYAN, E.; SAKHIULINA, G.T.; ANGYAN, L.

Functional significance of the recruiting potential mechanism when used as conditional stimulus for the elaboration of avoidance reflex. Acta physiol. acad. sci. hung. 23 no.2:155-167 '63.

1. Institute of Physiology, Medical University, Pecs.
(THALAMUS) (REFLEX, CONDITIONED) (AVOIDANCE LEARNING)
(ELECTROPHYSIOLOGY)

SAKHIULINA, G.T.; MERZHANOVA, G.Kh.

Changes in the recruiting response of dogs in the process of
conditioned reflex formation. Dokl. AN SSSR 151 no.4:989, 3 of cover
Ag '63. (MIRA 16:8)

1. Institut vysshey nervnoy deyatel'nosti i neyrofiziologii AN SSSR.
Predstavleno akademikom V.N. Chernigovskim.
(CONDITIONED RESPONSE)

AND'YAN, L. [Angyan, L.]; GRASHT'YAN, Ye. [Grastyán, E.]; SAKHIULINA, G.T.

Formation of conditioned avoidance reflex to stimulation of
the "recruiting " System used as a conditioned stimulus.
Zhur.vys.nerv.deiat. 13 no.2:228-234 Mr-Apr'63. (MIRA 16:9)

1. Institute of Physiology, Medical University, Pesht, Hungary,
and Institute of Higher Nervous Activity and Neurophysiology,
U.S.S.R. Academy of Sciences, Moscow.
(CONDITIONED RESPONSE) (ELECTROENCEPHALOGRAPHY)
(AVOIDANCE (PSYCHOLOGY))

ASHKIN, L. P. (1971)

Neurophysiological manifestation of a conditioned reflex formed in response to a stimulation of a tactile-muscle model. Zhur. vys. nerv. deyat. 18:13-15, 1971.

(1971, 18:5)

Neurophysiological manifestation of a conditioned reflex formed in response to a stimulation of a tactile-muscle model. Zhur. vys. nerv. deyat. 18:13-15, 1971.

POPOV, V.V.; SAKHIYEV, A.S.; KORABLINA, T.P.

Approximate method for determining the optimum reflux-to-product ratio in the course of the continuous rectification of a mixture of methylchlorosilanes. Plast.massy no.4:18-21 '61.

(MIRA 14:4)

(Silane)

(Distillation, Fractional)

POPOV, V.V.; KORABLINA, T.P.; SAKHIYEV, A.S.

Calculation of continuous rectification systems with recycling of
distillate and stillage residue flow. Plast.massy no.6:25-28 '61.
(MIRA 14:5)

(Distillation, Fractional)

ACC NR: AT7002905

SOURCE CODE: UR/0000/66/000/000/0070/0084

AUTHOR: Sakhiyev, A. S.; Stel'makh, G. P.; Chesnokov, N. A.; Bassel', A. B.

ORG: none

TITLE: Calculation of the particle evaporation process in a high temperature gas stream under non-adiabatic conditions

SOURCE: AN UkrSSR. Fizika goreniya (Combustion physics). Kiev, Izd-vo Naukova dumka, 1966, 70-84

TOPIC TAGS: plasma jet, metal powder, combustion, solid propellant, metal combustion, *POWDER METAL PRODUCTION, NONADIABATIC PROCESS*

ABSTRACT: Methods of producing ultrafine metal powders by injecting coarse powder into plasma jets have recently become of considerable interest. The heating, melting, and evaporation processes of the particles and important for the design of reactors. In the present study, an analysis was made of the melting and evaporation processes of metal particles in high-temperature plasma jets, and formulas were derived for calculating the time and path length required for melting and evaporation. Formulas for calculating the particle velocity during evaporation were also derived. Empirical and theoretical relationships are given for the temperature field in a cylindrical reactor into which an argon jet discharges. Orig. art. has: 40 formulas and 1 figure. [PV]

SUB CODE: 21,11/SUBM DATE: 12Sep66/ ORIG REF: 004/ OTH REF: 008

Card 1/1

UDC: none

50174

S/191/62/000/004/007/017
B110/B138

15.8170

AUTHORS: Sakhiyev, A. S., Frayman, R. S., Kornev, M. A.

TITLE: Electrostatic precipitator for removing solid impurities from the gases of alkyl and aryl chlorosilane syntheses

PERIODICAL: Plasticheskiye massy, no. 4, 1962, 19-21

TEXT: The electrostatic cleaning of gaseous methyl and phenyl chlorosilanes was studied on the apparatus shown in Fig. 1. Gas supply was checked on flow meter 2. The dust content of the gas flow before and after passing through the filter was measured by means of outlets with adapters 12. Flow meter 13 measured the gas flow through 12. The electrostatic precipitator consisted of a tube 95 mm diam, and corona-discharge electrode 11, of Nichrome wire 3750 mm long and 1.8 mm diam, attached to Teflon insulator 7. High-voltage was supplied by a step-up-cum-rectifying system for full-wave rectification consisting of a high-voltage 220v/110kv transformer, four KP-110 (KR-110) high-voltage kenotrons, and four 220/12v filament transformers to the kenotrons, and the control panel. Rectification was carried out according to the Graetz

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X

Electrostatic precipitator for...

S/191/62/000/004/007/017
B110/B136

system. The adapter, 120 mm long and 10 mm diam, had 10-12 holes 2 mm diam in the bottom (Fig. 4). Asbestos fiber and a rigid wire spiral underneath the bottom protected the glass wool packing from crushing. The dust content after filtering was $0.0518-0.103 \text{ g/m}^3$. The efficiency of the electrostatic precipitator was over 99 %. Since 13.1 kg of solid fragments were separated in the production of 213 liters of phenyl chlorosilane condensate, the content of solid fragments in the uncleaned condensate would amount to $13.1 \cdot 1000 / 213 = 61 \text{ g/liter}$. Without the filter, the condensate was quite black and opaque. It was not possible to vary the throughput rate appreciably in the experiments since, with the size of reaction vessel and filter used, it depends on the rate of the pseudoliquefied contact mass. The optimum rate has yet to be found, but electrostatic precipitators for industrial reaction vessels cannot be too large as the hourly volume of gas for cleaning is small. The corona discharge electrodes were cleaned by vibrations in the longitudinal direction at 25 cps and an amplitude of 2 mm, and the precipitator electrode by vibrations in the transverse direction at the same frequency and amplitude of 0.3 mm. In experiments with methyl chlorosilanes the

Card 2/4

Electrostatic precipitator for...

S/191/62/000/004/007/017
B110/B138

temperature of the heat carrier was 200°C, and 250°C in the synthesis of phenyl chlorosilanes. The following data are given: voltage 30 kv, amperage 2 ma, rate of gas flow < 0.1 m/sec. The synthesis of methyl chlorosilanes took place at 5 atm gauge pressure and that of phenyl chlorosilanes at 1 atm gauge pressure. There are 4 figures and 2 tables.

Fig. 1. Diagram of setup used for investigating electrostatic precipitation of gaseous methyl and phenyl chlorosilanes.

Legend: (1) Supply tank, (2,13) direct-reading flow meters, (3) heater-evaporator, (4) reaction vessel, (6) outlet of ditolyl methane heat carrier, (7) Teflon insulator, (8) sylphon bellows, (9) stand, (10) vibrator, (11) corona-discharge electrode, (12) adapter, (14) condenser, (15) collecting vessel, (16) heat carrier inlet, (18) earth.

Fig. 4. Adapter.

Legend: (1) holder for adapter, (2) packings, (3) adapter, (4) electric heater, (5) insulation, (6) spring, (7) glass wool, (8) asbestos.

Card 3/4

ACCESSION NR: AP4011534

S/0170/64/000/001/0028/0036

AUTHOR: Tsirlin, A. M.; Sakhiyev, A. S.; Voronin, B. D.; Khodov, G. Ya.

TITLE: Study of heat transfer between the wall of a packed tube and a gas at elevated temperatures

SOURCE: Inzhenerno-fizicheskiy zhurnal, no. 1, 1964, 28-36

TOPIC TAGS: electric gas heater, gas heater, heat transfer, packed tube, convective heat transfer, radiant heat transfer

ABSTRACT: A new type of electric gas heater (see enclosure) is used to investigate the heat transfer coefficient between the wall of a packed tube and hydrogen or nitrogen under temperatures conditions not previously studied, when there is appreciable radiant heat transfer. The tubes tested were 70- and 250-mm in diameter filled with molybdenum-tin spirals 0.1-mm thick, 4-mm in diameter, and 6-mm long. The details of the gas-heater are given. The gas test temperature ranged from 270 to 750 C, that of the pipe from 700 to 1100 c, and the Reynolds numbers ranged from 11.3 to 323. Curves are plotted for the experimental data and are generalized in two formulas in terms of Nusselt numbers. Results are compared with those obtained at low temperatures and are reduced to general equations which hold for a wide range

Cord 1/12

ACCESSION NR: AP4011534

of temperatures and a variety of geometrical pipe shapes. It is shown that packing increases heat transfer at high temperatures by factors of 20 to 150. The packing serves only to spoil the gas flow and thereby intensify convective heat transfer. Orig. art. has 4 figures and 13 formulas.

ASSOCIATION: none

SUBMITTED: 20Mar63

DATE ACQ: 14Feb64

ENCL: 01

SUB CODE: IE, SD, AI

NO REF SOV: 010

OTHER: 001

Card 2/3 2

YEGOROVA, I.G. (Moskva); SAKHUYEV, A.S. (Moskva); BASSEL', V.B. (Moskva);
KOSAREVA, N.S. (Moskva)

Using bag-type filters to trap finely dispersed metal particles
from aerosols. Porosh. met. 5 no.9:104-109 S '65.

(MIRA 18:9)

L 29854-66 EWT(1)/ETC(f) NW

ACC NR: AP6012681

SOURCE CODE: UR/0170/66/010/004/0508/0512

AUTHOR: Stel'makh, G. P.; Chesnokov, N. A.; Sakhiyev, A. S.

69
13

ORG: none

TITLE: Characteristics of heat transfer in the channel of a sectional electric arc gas heater

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 10, no. 4, 1966, 508-512

TOPIC TAGS: heat transfer, electric arc, argon, heating

ABSTRACT: The experimental apparatus, shown in the article, has a tungsten cathode with a diameter of 10 mm, auxiliary and main anodes, and an intermediate section cooled with water. The ratio of the length of the channel to its diameter is equal to 8. The heater operates on direct current and its power is designed for 100 kilowatts; the working gas is argon. In the tests, the ranges of the parameters were between the following limits: argon flow rate, 1-3.7 grams/sec; pressure, 4×10^3 - 200×10^3 newtons/m²; power, 25-50 kilowatts; current strength, 300-700 amp; voltage, 70-120 volts; and, temperature of gas at outlet from channel, 10,000-13,000°K. Initial data and experimental data are shown in tabular form. On the basis of the experimental results the

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UDC: 536.242

L 29854-66

ACC NR: AP6012681

following empirical expression was obtained:

$$St = 0,7 Kn^{0.25}, \quad (2)$$

$$300 < Re < 1500; 0,002 < Kn < 0,06; 0,1 < M < 1,0.$$

This expression can be used for a qualitative evaluation of the effect of a decrease in pressure on the heat transfer rate in electric arc gas heaters with sectional channels, and for an approximate quantitative evaluation of heat transfer in similar electric arc heaters with a change of pressure in the system. Orig. art. has: 2 formulas, 2 figures and 1 table.

SUB CODE: 13,20/ SUBM DATE: 07Oct65/ ORIG REF: 008/ OTH REF: 001

Card 2/2 *fv*

LYUBUSHKIN, V.T.; SAKHIYEV, I.S.; ARUTYUNOVA, L.S.

Physical properties of corn flakes. Izv. vys. ucheb. zav.;
pishch. tekhn. no.6:46-47 '63. (MIRA 17:3)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promysh-
lennosti, kafedra promyshlennoy pererabotki kukuruzy.

SAKHIYEVA, Sh. M.

SAKHIYEVA, Sh. M. - "Multiple Treatment of Affections of the Organs of Sight in Poisoning by Methyl Alcohol in the Light of Clinical Manifestations and Experiments." Sub 29 Jan 52, Central Inst for the Advanced Training of Physicians. (Dissertation for the Degree of Candidate in Medical Sciences).

SO: Vechernaya Moskva January-December 1952

SAKHIYEVA, S.M.

Severe injury of the orbit with preservation of the eyeball.
Vest.oft. 33 no.3:41-42 My-Je '54. (MLRA 7:6)

1. Iz glaznoy kliniki (dir. prof. N.A.Pletneva) II Moskovskogo
meditsinskogo instituta imeni I.V.Stalina.

(EYE,

*preserv. in severe inj. of orbit)

(ORBIT, wounds and injuries,

*preserv. of eye)

(WOUNDS AND INJURIES,

*orbit, with preserv. of eye)

PLETNEVA, N.A.; SAKHIYEVA, S.M.; KAPUSTINA, Ye.V.

Aqueous humor outflow. Vest. oft. 34 no. 4:14-17 J1-Ag '55.

(MLRA 8:10)

1. Iz kafedry glaznykh bolezney II Moskovskogo meditsinskogo
instituta imeni I.V. Stalina (zav. prof. N.A. Pletneva) i
laboratorii mozga Pediatricheskogo instituta AMN SSSR (zav.
prof. B.N. Klozovskiy)

(AQUEOUS HUMOR,
outflow)

PLETNEVA, N.A., prof., SAKHIYEVA, S.M., assistant

Diamox in preparation of patients for surgery in glaucoma.
Vestn. oft. 71 no. 3:3-6 My-Je '58 (MIRA 11:9)

1. Glavnaya klinika (dir. - prof. N.A. Pletneva) II Moskovskogo
meditsinskogo instituta imeni N.I. Pirogova:
 (ACETAZOLAMIDE, ther. use
 glaucoma, preop. (Rus))
 (GLAUCOMA, ther., surgery
 premedication with acetazolamide (Rus))

PLETNEVA, N.A., prof.; SAKHIYEVA, S.M., assistant

Blowing oxygen into the eye cavit in hemorrhages into the vitreous body and the anterior chamber. Vest.oft. 72 no.5:21-25 S-O '59.

(MIRA 13:3)

1. Kafedra glaznykh bolezney II Moskovskogo meditsinskogo instituta imeni N.I. Pirogova.

(EYE DISEASES, ther.)

(VITREOUS BODY, dis.)

(OXYGEN, ther.)

PLETNEVA, N.A., prof.; SAKHIYEVA, S.M.; ZAYCHIK, P.S.

Nicotine test in glaucoma. Vest.oft. no.1:3-8 '62.

(MIRA 15:11)

1. Kafedra glaznykh bolezney II Moskovskogo meditsinskogo instituta
imeni N.I. Pirogova.

(GLAUCOMA)

(NICOTINIC ACID)

PLETNEVA, N.A., prof.; SAKHIYEVA, S.M.

Effect of octatensin on the intraocular pressure in glaucoma patients. Vest. oft. no. 5:20-26 '62. (MIRA 15:12)

1. Kafedra glaznykh bolezhey II Moskovskogo meditsinskogo instituta imeni N.I. Pirogova.
(GUANETHIDINE) (GLAUCOMA) (INTRAOCULAR PRESSURE)

CIA-RDP86-00513R001446810009-8"

S/194/62/000/006/061/232
D295/D308

AUTHORS: Sakhmanov, A.V., Semenov, V.V., and Stepura, E.F.

TITLE: Optimum operating conditions of a symmetrical twin T-shaped bridge in an electro-hydraulic control system of water-turbine speed

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 6, 1962, abstract 6-2-149 u (Sb. rabot po vopr. elektromekhan., In-t elektromekhan AN SSSR, no. 5, 1961 95-98)

TEXT: It is suggested to use, in circuits determining the deviation of the output frequency of the generator from its set value, a twin T-shaped bridge instead of induction coils with a steel core or tuning forks, which not only increases the stability of the circuit characteristics, but also permits to regulate the slope of the characteristic of the frequency-deviation detector by varying the voltage applied at the input of the bridge. An investigation is carried out of a twin T-shaped bridge having as the load the control windings of a magnetic amplifier. On the basis of equations describing

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Optimum operating conditions of a ...

S/194/62/000/006/061/232
D295/D308

bing the steady-state operating conditions of the bridge, an expression is found for the slope of the frequency dependence of the in-phase current component in the load resistance, and the optimum value of the transformation ratio of the matching transformer is found for which this slope is a maximum. 7 references. [Abstractor's note: Complete translation.]

Card 2/2

SAKHMANOV, A.V.; SEMENOV, V.V.; STEPURA, E.F.

Regulation of the velocity of a hydraulic turbine-generator unit with consideration of perturbations. Sbor. rab. po vop. elektromekh. no.9: 314-323 '63.

Network for the automatic control of traction motor load. Ibid.:145-153 (MIRA 17:2)

MAYOROV, S.N. Prinimali uchastiye: NAZAROVA, Zh., student; STEPANOVA, T.F., student; KUZNETSOVA, G.P., student; KALININA, S.A., student; SAKHNENKO, A.M.; student; CHERKASHCHENKO, V.I., student.

Content of vitamin C in onions of the Romanovskii and Msterskii varieties. Vop. pit. 22 no.1:89-90 Ja-F'63

(MIRA 16:11)

1. Iz kafedry khimii (zav. - dotsent S.N. Mayorov) Kostromsko-go pedagogicheskogo instituta i iz kafedry khimii Cherkassko-go pedagogicheskogo instituta.

*

SAKHINENKO, A.M.

Calculation of curves with the "Ural-1" computer. Put' i put.khoz.
8 no.3:24-25 '64. (MIRA 17:3)

1. Nachal'nik sektora kapital'nogo remonta puti Dorproyekta, Voronezh.

S/138/60/000/008/010/015/XX
A051/A029

AUTHORS: Blokh, G.A.; Melamed, Ch. L.; Sakhnenko, I.A.

TITLE: A New Method of Applying the Vulcanized Tread in Automobile Tire Casing Repair

PERIODICAL: Kauchuk i Rezina, 1960, No. 8, pp. 30 - 32

TEXT: The present method used in the Soviet Union for automobile casing repair was found to be impractical, requiring excessive work and equipment. In this method a non-vulcanized tread is applied to the casing being repaired and the latter vulcanized in ring-shaped individual vulcanizers at a temperature of 140 - 150°C for 1.5 - 2 hours. In 1957 the Rubber Department of the Dnepropetrovskiy khimiki-tehnologicheskii institut (Dnepropetrovsk Institute of Chemical Technology) in cooperation with the Dnepropetrovskiy shinoremontnyy zavod (Dnepropetrovsk Tire Repair Plant) began investigating the possibility of using pre-vulcanized treads in casing repair. A study was made of: 1) the application of adhesives having special compositions and used to fasten the pre-vulcanized tread to the casing, 2) the use of laminated non-vulcanized mixtures capable of co-vulcanizing with the pre-vulcanized tread and tire casing at room or low temperatures

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A051/A029

A New Method of Applying the Vulcanized Tread in Automobile Tire Casing Repair

(80°C). A number of adhesives with various compositions were found to have adhesion indices of 0.5 to 0.6 kg/2.5 cm both at room and elevated temperature (100°C) which do not satisfy the ГОСТ (GOST) standard of 3.5 kg/1 cm. Adhesives containing oxidation-reduction systems were also found to have insufficient adhesion indices. Adhesives based on natural rubbery СКБ (SKB) and СКБ-30 (SKS-30) and containing various oxidation-reduction systems were investigated under rubber-doubling conditions: duration 3 - 5 hours, temperature 50 - 70°C. The obtained data are listed in Table 2. A third method using a rapidly-vulcanizing laminated mixture (Table 3) was investigated. Best results were obtained at 80 - 90°C using a natural rubber layer, containing cymate and also a combination of cymate and ДФР (DFG). The strength of adhesion was 17.5 kg/2.5 cm, the thickness of the layer was 0.7 - 1 mm. Based on these results, experimental 6.00 - 16 tire casings were produced, repaired at a temperature of 80 - 90°C applying a pre-vulcanized tread based on laminated rubber. Service tests performed by the Taxi depot revealed the tires to have a run capacity of 5,000 - 15,000 km. Their destruction eventually took place not as a result of side or casing rupture, but rather from exfoliation of the casing surface. Other tire casings, repaired with pre-vulcanized treads and

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A New Method of Applying the Vulcanized Tread in Automobile Tire Casing Repair

fastened to the casing with steel bands followed by subsequent heating in a vat at 80°C had a run capacity of 6,000 km. Studies of rubber mixtures and adhesives containing amino-salts of alkyldithiocarbamate acids and sulfur, zinc oxide and zinc stearate (Table 4) showed that dibutyldithiocarbamate dibutylamine and dibutyldithiocarbamate triethylamine used as accelerators in adhesives and layers based on natural rubber ensure a high strength of adhesion, when the rubber is vulcanized at low temperatures (about 20°C) and the vulcanization process at this temperature is completed in 3 - 4 days. It is recommended that the pre-vulcanized tread be made in the form of a bracelet rather than a band to ensure a strong bond at the jointed end of the tread that the adhesive be applied on the internal surface of the tread bracelet and the external surface of the casing, and between these a quickly-vulcanizing mixture be added. Pressure in the running compartment would secure the contact between the tread and the casing. Two types of rubber mixture and the corresponding adhesive should be manufactured with sulfur and no accelerator or without sulfur and an accelerator to avoid scorching during storage. The authors stress the fact that low-temperature vulcanization could be of value to the rubber article and cable-manufacturing industries, especially where multi-layer rubber products, including thermoplasts (polyethylene, etc.) are produced. There

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S/138/60/000/008/010/015/XX
A051/A029

A New Method of Applying the Vulcanized Tread in Automobile Tire Casing Repair
are 4 tables, and 3 Soviet references.

ASSOCIATION: Dnepropetrovskiy khimiko-tekhnologicheskii institut, im. F.E. Dzerzhinskogo i Dnepropetrovskiy shinoremontnyy zavod (Dnepropetrovsk Institute of Chemical Technology, imeni F.E. Dzerzhinskiy and Dnepropetrovsk Tire-Repair Plant)

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S/138/60/000/008/010/015/XX
A051/A029

A New Method of Applying the Vulcanized Tread in Automobile Tire Casing Repair

Table 2:

Strength of Adhesion of Rubber to Rubber Using Adhesives, Containing Oxidation-Reduction Systems

Characteristics of the System	Strength of Adhesion, kg/2.5cm width of the sample		
	Natural Rubber	SKB	SKB-30
benzoyl peroxide-benzoin-iron naphthenate	4.0 - 5.0	1.3 - 2.0	3.5 - 4.0
iron naphthenate-benzoin	2.8 - 3.5	0.9 - 1.1	2.3 - 3.5
benzoyl peroxide-benzoin	4.4 - 5.0	0.7 - 1.4	3.0 - 3.2
isopropyl hydrogen peroxide-benzene-diphenyl guanidine-dibenzothiazoldisulfide	4.7 - 5.0	1.0 - 1.6	4.0 - 5.0
isopropyl hydrogen peroxide-benzene-mercaptobenzothiazol	3.2 - 4.0	1.3 - 2.0	2.3 - 4.0
benzoyl peroxide-iron naphthenate-polyethylene amines	3.7 - 6.0	1.7 - 2.2	3.2 - 4.2

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S/138/60/000/008/010/015/XX
A051/A029

A New Method of Applying the Vulcanized Tread in Automobile Tire Casing Repair

Table 3:

Strength of Adhesion of the Tread Rubber to the Casing Using a Laminated Quickly-Vulcanizing Mixture

Composition of the Laminated Mixture	Doubling Con- ditions		Strength of Adhesion kg/2.5 cm width of sample
	duration min,	temperature, °C	
NR+zinc butylxanthogenate and paratoluidine	60	80 - 90	1.6
NR+zinc dimethyldithiocarbamate (zimate)	60	80 - 90	more than 17.5
NR+zinc dimethyldithiocarbamate (zimate) diphenyl guanidine (1:1)	20	80 - 90	more than 17.5
chloroprene rubber+zinc dimethyldithiocarbamate	60	80 - 90	6.0
NR+benzoyl peroxide + iron naphthenate + benzoin	180	50 - 70	3.5

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S/138/60/000/C08/010/015/XX
A051/A029

A New Method of Applying the Vulcanized Tread in Automobile Tire Casing Repair

Table 3:

Strength of Adhesion of the Tread Rubber to the Casing Using a Laminated Quickly-Vulcanizing Mixture

Composition of the Laminated Mixture	Doubling Con- ditions		Strength of Adhesion kg/ /2.5 cm width of sample
	duration min,	temperature °C	
NR+isopropyl benzene hydrogen peroxide + DFG+altax	180	50 - 70	4.5
The same, based on SKS-30	180	50 - 70	5.0
NR + benzoyl peroxide + iron naphthenate + polyethylene amines	180	50 - 70	6.0
The same, based on SKS-30	180	50 - 70	5.2

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S/138/60/000/008/010/015/XX
A051/A029

A New Method of Applying the Vulcanized Tread in Automobile Tire Casing Repair

Table 4:

Effect of Amino-Salts of Dialkyldithiocarbamine Acids on the Strength of Adhesion Between the Tread and Casing Rubbers

Accelerator	Vulcanization Duration at 18°C, hours	Strength of Adhesion, kg/2.5 cm width of sample
Dibutyldithiocarbamate dibutylamine $(C_4H_9)_2NC(S)SH \cdot HN(C_4H_9)_2$	24	6.0
	72	11.0
	144	18.0
Dibutyldithiocarbamate triethylamine $(C_4H_9)_2NC(S)SH \cdot N(C_2H_5)_3$	24	6.0
	96	10.5
	144	17.0

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A New Method of Applying the Vulcanized Tread in Automobile Tire Casing Repair

Table 4:

Effect of Amino-Salts of Dialkyldithiocarbamate Acids on the Strength of Adhesion Between the Tread and Casing Rubbers

Accelerator	Vulcanization Duration at 18°C, hours	Strength of Ad- hesion, kg/2.5cm width of sample
Dibutyldithiocarbamate tributylamine (C ₄ H ₉) ₂ NC(S)SH.N(C ₄ H ₉) ₃	24	3.5
	96	4.5
	144	5.0
Diethyldithiocarbamate diethylamine (C ₂ H ₅) ₂ NC(S)SH.HN(C ₂ H ₅) ₂	72	4.5
	240	5.0

Card 9/9

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